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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,204	09/10/2003	Takanori Kohno	740186-29	3247
22204	7590	01/26/2005		
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			EXAMINER MCCLOUD, RENATA D	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/658,204

Applicant(s)

KOHNO, TAKANORI

Examiner

Renata McCloud

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4 and 5 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/10/2003
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of loads must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 1 objected to because of the following informalities: the limitation "type" is unclear. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: The limitation "one of which is driven by a constant electric current" is indefinite. It is unclear what "which one" is referring to, the terminals or the transistors.

On page 34, line one is indefinite. It is unclear what the terminal is adjacent to. And it is unclear what is "paired".

Claim 5: The limitation "one of which is driven by a constant electric current" is indefinite. It is unclear what "which one" is referring to, the terminals or the transistors.

On page 36, in the last paragraph, the first two lines are indefinite. It is unclear what the terminal is adjacent to. And it is unclear what is "paired".

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishimura et al (US 4855778).

**Claim 1:** a circuit for driving a plurality of loads in a plurality of motors (Fig. 1c: M1, M2); a control circuit (8) for controlling the driving circuit (Q1-Q6), wherein the driving circuit has  $n=1$  output terminals (3 terminals between M1 and M2) to connect  $n$  number of loads (2 motors, M1, M2), each output terminal being led out from a node of a PNP transistor and a NPN transistor connected in series such that each pair of the output terminals adjacent to one another form a bridge circuit (Q1/Q2, Q3/Q4, Q5/Q6), the control circuit turns (8) on and off the transistors to energize the load in a normal direction; one of the terminals is led from a node of a PNP and NPN transistor (Q6/Q5), driven by an electric current through an open loop and another output terminal adjacent (Q4/Q3) form a bridge circuit for driving the load by the current through either a feedback loop (Q1 and Q4 off, Q2 and Q3 on) or an open loop (Q1 and Q4 on, Q2 and Q3 off).

**Claim 4:** a bridge drives a motor in a camera in such a manner that the motor is driven by the current through an open loop when opening the shutter and driven in a feed back loop when closing the shutter (Col. 7:34-64).

**Claim 5:** a lens barrel driving apparatus comprising a lens barrel with a plurality of mechanisms (Col. 1:10-15); a plurality of motor integrated to drive the mechanisms (Col. 1: 10-15); a circuit for driving a plurality of loads in a plurality of motors (Fig.

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1c:M1, M2); a control circuit (8) for controlling the driving circuit(Q1-Q6), wherein the driving circuit has  $n=1$  output terminals (3 terminals between M1 and M2) to connect  $n$  number of loads (2 motors, M1, M2), each output terminal being led out from a node of a PNP transistor and a NPN transistor connected in series such that each pair of the output terminals adjacent to one another form a bridge circuit (Q1/Q2, Q3/Q4, Q5/Q6), the control circuit turns (8) on and off the transistors to energize the load in a normal direction; one of the terminals is led from a node of a PNP and NPN transistor (Q6/Q5), driven by an electric current through an open loop and another output terminal adjacent (Q4/Q3) form a bridge circuit for driving the load by the current through either a feedback loop (Q1 and Q4 off, Q2 and Q3 on) or an open loop (Q1 and Q4 on, Q2 and Q3 off).

***Allowable Subject Matter***

7. Claims 2-3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach or make obvious a the combination of (a) a current detecting resistor and an op-amp that controls a bridge based on the detected current and (b) a current setting resistor connected to a current mirror transistor for setting constant electric current

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**Conclusion**

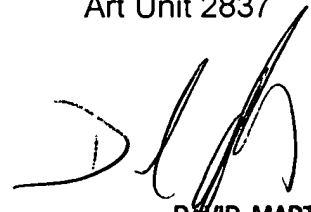
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2800 ext. 4. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDM

Renata McCloud  
Examiner  
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A handwritten signature in black ink, appearing to read 'DM', is written over the printed name of David Martin.

DAVID MARTIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800